

CLAIMS

1. A processing apparatus for an object to be processed comprising:

a partition that defines an outside space area in which a container hermetically containing an object to be processed and having a lid is conveyed, and an inside space area in which the object to be processed taken out from the container is conveyed,

an opening part provided in the partition, through which the two space areas are communicated with each other,

a door mechanism that can close the opening part,

a lid opening-and-closing mechanism provided at the door mechanism, and capable of opening and closing the lid of the container located at a predetermined position in the outside space area under a situation wherein the door mechanism closes the opening part,

a driving unit that moves the lid opening-and-closing mechanism away from the container relatively to the door mechanism,

a cover member that defines a driving-unit arrangement room, in which the driving unit is contained, in the door mechanism, and

a gas-discharging mechanism that discharges a gas in the driving-unit arrangement room.

2. A processing apparatus according to claim 1, wherein

an end edge of the opening part on a side of the inside space area forms a plane inclined against the partition, and

the door mechanism is hermetically connectable with the end edge and movable in a plane direction of the partition.

3. A processing apparatus according to claim 1 or 2, wherein

a sealing member is provided at the whole circumference of an end edge of the opening part on a side of the outside space area, and

the lid opening-and-closing mechanism is hermetically connectable with the sealing member by an action of the driving unit under a situation wherein the door mechanism closes the opening part.

4. A processing apparatus according to claim 3, wherein

the sealing member is a member having a Y-shaped section.

5. A processing apparatus according to any of claims 1 to 4, wherein

the door mechanism has a pressure-adjusting mechanism that can gradually open through one space and the other space with respect to the door mechanism in order to leisurely reduce a difference pressure between the both spaces to substantially zero.